



Department of Commerce

Safety & Buildings Division

201 West Washington Avenue

P.O. Box 2658

Madison, WI 53701-2658

Evaluation #

200110-H (Replaces 990022-H
Revised)

Wisconsin Building Products Evaluation

Material

Direct Vent Forced Air Furnace

Manufacturer

International Comfort Products
650 Heil-Quaker Avenue
Lewisburg, Tennessee 37091-0128

SCOPE OF EVALUATION

The direct vent forced air furnaces, manufactured by International Comfort Products, were evaluated for use as direct vent sealed combustion chamber appliances conforming to in accordance with **ss. Comm 51.01 (29a)** and **Comm 64.21** under the current edition of the Wisconsin Administrative Building and Heating, Ventilating and Air Conditioning Code.

DESCRIPTION AND USE

The following models are covered by this approval:

Trade Names: Arcoaire/Comfortmaker

Model Numbers

GUH(060, 075)A012-I (N, L) ***

GUH100A016-I (N, L) ***

GUH125A016, 020-I (N, L) ***

Vent Kit No. 8G03022

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GUA040A010AI (L, M, N) *+ #

GUA060A012AI (L, M, N) *+ #

GUA080A (012, 016*)AI (L, M, N,)+ #

GUA100A (016, 020*)AI (L, M, N)+ #

Vent Kit No. 8G03004,

Vent Kit No. 8G03004,

Vent Kit No. 8G03004,

Vent Kit No. 8G03005,

8G03024 **

8G03024 **

8G03024 **

8G03025 **

GUA120A (016, 020)AI (L, M, N)*+ #	Vent Kit No. 8G03005, 8G03025 **
GDA060A012AI (L, M, N)+ #	Vent Kit No. 8G03004, 8G03024 **
GDA080A (012, 016)AI (L, M, N)+ #	Vent Kit No. 8G03004, 8G03024 **
GDA100A (016, 020)AI (L, M, N)+ #	Vent Kit No. 8G03005, 8G03025 **
GDA120A (016, 020)AI (L, M, N)+ #	Vent Kit No. 8G03005, 8G03025 **
GDH075A012I (L, M, N)* ***	Vent Kit No. 8G03022
GDH100A016I (L, M, N)* ***	Vent Kit No. 8G03022
GDH125A020I (L, M, N)* ***	Vent Kit No. 8G03022
DGHH050A012I (N, L)	
DGHH075A012I (N, L)	
DGHH100A016I (N, L)	
DGHH125A020I (N, L)	
(A, C)GUA040A010BI (M, N, L)*	TNE050B12
(A, C)GUA060A012BI (M, N, L)*	TNE075F14
(A, C)GUA080A012BI (M, N, L)	TNE100F14(J20)
(A, C)GUA080A016BI (M, N, L)*	TNE125J20
(A, C)GUA100A016BI (M, N, L)	
(A, C)GUA100A020BI (M, N, L)*	TNK050F12
(A, C)GUA120A016BI (M, N, L)	TNK075F14
(A, C)GUA120A020BI (M, N, L)*	TNK100J16
	TNK125N20
GUK050A012-IN	VNK050F12
GUK075A012-IN	VNK075F14
GUK100A016-IN	VNK100J16
GUK125A020-IN	VNK125N20
GDK050A012-IN***	
GDK075A012-IN***	
GDK100A016-IN***	
GDK125A020-IN***	
GCK050N12A1	
GCK075N12A1	
GCK100N16A1	
GCK125N20A1	

Trade Names: Heil and Tempstar

<u>Model Numbers:</u>	NDGM050EFA	NTPM050FFA
	NDGM075EGA	NTPM075GFA
NUG9050FFA1	NDGM100EHA	NTPM100HJA
NUG9075FGA1	NDGM125EKA	NTPM125KNA
NUG9100FHA1		
NUG9125FKA1	NCGM050EFA1	NTVM050FFA
	NCGM075EGA1	NTVM075GFA
NUGM050EFA	NCGM100EHA1	NTVM100JA
NUGM075EGA	NCGM125EKA1	NTVM125KNA
NUGM100EHA		
NUGM125EKA		

Notes:

- 1) The TNK, VNK, GUH and GDH Series may have the eleventh character replaced by A, B, C, or D, etc., indicating the manufacturer internal code.
- 2) ** These units are approved for venting with high temperature plastic pipe. The manufacturer makes a vent termination kit which is certified by AGA for use with these furnaces.
- 3) Models with suffix M are equipped with main burner rods for use with natural gas only, (GDAO Series).
- 4) The GDA, GDK and NDGM Series are downflow furnaces.

- 5) The GUH and GUA Series are upflow furnaces.
- 6) The CGUA Series are upflow gas furnaces with cooling.
- 7) The CGDA Series are counterflow gas furnaces with cooling.
- 8) The DGH Series are horizontal gas furnaces with cooling.
- 9) The NUG Series listed for use with natural gas also are for use with liquefied petroleum gases with the same ratings, clearances and trade names, but with prefix G replaced by prefix L.
- 10) The GDA, GDH, GUA, GUH and GUK Series listed for use with natural gas also are for use with liquefied petroleum gases with the same ratings, clearances and trade names, but with suffix N replaced by suffix L.
- 11) The GUA Series may have prefix A or C.
- 12) The GUH Series may have prefix A, B, C, or E.
- 13) The GUK, GDK and NDGM Series may have the eleventh character replaced by A through Z.
- 14) The GUA Series may have the eleventh character B replaced by subsequent letters.
- 15) The GUK and NUGM Series may be derated 20% with no model number change.
- 16) The NUG9 Series may have the fourth character 9 replaced by M and eight character F replaced by E to indicate a 20% derate.
- 17) The GDA, GDK and GDH Series may be installed on combustible flooring when equipped with a special base.
- 18) + clearance may be 3 inches when type B-1 vent is used.
- 19) # clearance may be 1 inch when type B-1 vent is used. When optional vent damper is supplied, a 6-inch clearance to vent damper is required.
- 20) * unit has been determined to be a Category I type furnace when vented vertically and may be vented horizontally when employing special vent kits.
- 21) *** unit has been determined to be a Category IV type furnace when vented vertically and may be vented horizontally when employing special vent kits.
- 22) The GDK and NDGM series listed for use with natural gas also are for use with liquefied petroleum gases with the same ratings, clearances and trade names.
- 23) The eight character E of the NDGM series indicates 90 percent sealed combustion, dual certified (direct vent or central furnace).
- 24) The NDGM series may have the trade name Airquest.

Trade Names: Heil, Tempstar, Airquest and Kenmore

Model Numbers:

Downflow	Upflow/Horiz.	
NDC7050BFA	NTC7050BFA	NCPM050FFB
NDC7075BFA	NTC7075BFA	NCPM075GFB
NDC7100BHA	NTC7100BHA	NCPM100HJB
NDC7125BKA	NTC7125BKA	NCPM125KNB
NTP6050FBA	TCK050F12	
NTP6075GFA	TCK075F14	
NTP6100GF(KJ)A	TCK100J16	
NTP6125KJA	TCK125N20	

Notes:

1. The NTP6 series listed for use with natural gas also are for use with liquefied petroleum gases with the same ratings, clearances and trade names.
2. The NTP6 series models are also certified for use with a field installed masonry chimney draft hood kit, manufacturer's Part Number NAHL00 (1, 2, 3, 4, 5, 6) DH.

Trade names: Arcoaire and Comfortmaker

Model Numbers:

Downflow	Upflow/Horiz.
GDL050N12A	GNL050N12A
GDL075N12A	GNL075N12A
GDL100N16A	GNL100N16A
GDL125N20A	GNL125N20A

Venting Requirements

Model No.	Material	Dia.	*Length Direct Vent
GDL/NDC/GNL NTC7(100,125)	Radel A-200	4"	30" max./5" min.
GDL/NDC/GNL NTC7(050, 075)	Radel A-200	3"	30" max./5" min.

* = maximum length plus the use of 6 elbows.

Installation Clearances

The installation clearances are as follows:

top	0 inches
front	3 inches
vent	3 inches
rear	0 inches
left side	0 inches
right side	0 inches
floor	combustible

Trade Names: Heil, Tempstar, Airquest and Kenmore

Model Numbers:

NT (C,N) 5050	GNJ050	NUG3050	GUJ050
NT (C,N) 5075	GNJ075	NUG3070	GUJ075
NT (C,N) 5100	GNJ100	NUG3100	GUJ100
NT (C,N) 5125	GNJ125	NUG3125	GUJ125
NT (C,N) 5150	GNJ150		

Models series NTP6, NUG, and GUJ models are for upflow installation only.

Models series NT(C,N)5, and GNJ may be installed as upflow or horizontal.

VENTING REQUIREMENTS

For horizontal venting on the NT(C,N)5 and the GNJ, thermoplastic vent pipe (Hart and Cooley ULTRAVENT or Plexco PLEXVENT II) with maximum vent length of 30 feet plus three 90° elbows can be used (two 45° elbows may be substituted). The minimum vent length is 5 feet. A one foot section of 3" dia. single wall 26 gauge galvanized or steel pipe is required at the vent collar of the furnace, prior to connection on plastic vent pipe. These series of furnaces can also use a Field Controls Model No. SWG-4HD, or Tjernlund Products Model No. GPAK-(J,1)T Remote Inducer.

INSTALLATION CLEARANCES

The installation clearances are as follows:

top	1 inch	
front	6 inches	
	3 inches	with B-1 vent
vent	6 inches	(single wall pipe)
	1 inch	(type B-1 vent)
	5 inches	(thermoplastic pipe)
rear	0 inches	
left side	0 inches	
right side	0 inches	
floor	combustible	

Trade Names: Arcoaire/Comfortmaker

Model numbers:

GNK050N12A	GNM050N12A
GNK075N14A	GNM075N14A
GNK100N16A	GNM100N16A
GNK125N20A	GNM125N20A

Trade Names: Heil and Tempstar

Model numbers:

NTGM050EFA	NTG9050FFA
NTGM075EGA	NTG9075FGA
NTGM100EHA	NTG9100FHA
NTGM125EKA	NTG9125FKA

- Notes:** 1) The GNK, GNM, NTGM AND NTG9 Series listed for use with natural gas also are for use with liquified prtroleum gases with the same ratings, clearances and trade names.
2) The NTG9, and NTGM model series may be derated 20% with no model number change.

Model Number Breakdown: Arcoaire, Comfortmaker

Explanation of each character of the model number:

Character	Description
G	Type of fuel
U, N	U = Upflow, N = Multipositional (left side only)
K, M	Series
	BTUH Input
050	050 = 50,000 / 40,000
075	075 = 75,000 / 60,000
100	100 = 100,000 / 80,000
125	125 = 125,000 / 100,000
N	Power Supply A = 115 / 120V 60 HZ
	Blower range (cfm)
12	012 = 1200
16	016 = 1600
20	020 = 2000
A	Marketing Revision

Note: The eleventh character may have a letter "A" through "Z" to indicate an engineering revision.

Model Number Breakdown: Heil, Tempstar

Explanation of each character of the model number:

Character	Description
N	Product Family
U, T	U = Upflow, T = Multipositional (left side only)
G	Fuel G = Natural gas, L = LP
9	Series
M	Dual Certified as direct vent or central furnace
	BTUH Input
050	050 = 50,000 / 40,000
075	075 = 75,000 / 60,000
100	100 = 100,000 / 80,000
125	125 = 125,000 / 100,000

F	AFUE F = 90% sealed combustion
E	AFUE E = 90% sealed combustion , Dual certified (Direct vent or central furnace)
	Air flow (Tons)
F	F = 3
G	G = 3.5
H	H = 4
K	K = 5
A	Marketing Revision

CLEARANCES:

Type of Enclosure	X	Alcove	X	Closet
A) Top	1"			
B) Front	3"			
C) Vent	0"			
D) Rear	0"			
EL) Left side	0"			
ER) Right side	0"			
F) Floor	X	Combustible		Non-combustible

TEST RESULTS

The furnaces were evaluated in accordance with the standard for Direct Vent Central Furnaces, ANSI Z21.64 and Z21.47 by American Gas Association Laboratories (AGA) and were found to be acceptable to be covered under the AGA and UL classification services.

LIMITATIONS OF APPROVAL

The furnace models covered by this approval meet the definition of a direct vent sealed combustion chamber appliance specified in **s. Comm 51.02 (29a)** and may be installed as allowed in **s. Comm 64.21**. Architectural and mechanical plans and specifications shall be submitted in accordance with the requirements outlined in **ss. Comm 50.07** and **50.12** as stated in **s. Comm 63.01**. The furnaces shall be installed in accordance with their listing and the manufacturer's recommendations.

This approval will be valid through December 31, 2006, unless manufacturing modifications are made to the product or a re-examination is deemed necessary by the department. The Wisconsin Material Approval number must be provided when plans that include this product are submitted for review.

DISCLAIMER

The department is in no way endorsing or advertising this product. This approval addresses only the specified applications for the product and does not waive any code requirement not specified in this document.

Reviewed by: _____

Revision Date:

Approval Date: April 12, 2001

By: _____

Lee E. Finley, Jr.
Product & Material Review
Integrated Services Bureau

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